

PLENARY SPEAKERS			
Presenting author	Affiliation	Title	Schedule
Teri W. Odom	Northwestern University, USA	Resolving Single-Particle Nano-Bio Interactions in Real Time	Monday 10th, 9:15h
Andries Meijerink	Utrecht University, The Netherlands	Measuring Temperature with Light	Monday 10th, 14:00h
Michael Graetzel	EPFL Lausanne, Switzerland	TBC	Monday 10th, 10:30h
Peter Hegemann	Humboldt University, Germany	Engineered and unexpected natural rhodopsins for new optogenetic application	Tuesday 11th, 9:00h
Jennifer Dionne	Stanford University, USA	Bridging atomic and reactor scales in plasmon catalysis for efficient, selective, and sustainable chemistry	Tuesday 11th, 14:00h
Kentaro Nakamura	University of Tokyo, Japan	REY-rich mud: a key for sustainable development of our society	Thursday 13th, 9:00h
Luis D. Carlos	University of Aveiro, Portugal	How hot are living cells?	Thursday 13th, 14:00h
Luis M. Liz-Marzán	CIC biomaGUNE, Spain	Plasmonic Nanomaterials for Biosensing and Bioimaging	Friday 14th, 9:00h
Xiaogang Liu	National University of Singapore	Luminescent Nanoparticles: A Wonderful Toolbox for Imaging and Assistive Technologies	Friday 14th, 10:15h
Sara E. Skrabalak	Indiana University, USA	Nanocrystal Conversion Pathways to Compositionally Complex Nanocrystal Catalysts	Friday 14th, 11:15h

KEYNOTE SPEAKERS			
Presenting author	Affiliation	Title	Schedule
Bio session			
Daniel Jaque	Universidad Autónoma de Madrid, Spain	Nanomaterials for brain thermometry	Monday 10th, 15:15h
Su Qianqian	Shanghai University, China	Lanthanide luminescence enhancement by surface-interface regulation	Monday 10th, 15:45h
Bruno Viana	PSL University, France	Persistent luminescence nanoparticles for bioimaging, what is next ?	Tuesday 11th, 10:15h
Angela Seddon	University of Nottingham, UK	Shining light on life	Tuesday 11th, 10:45h
Guaying Chen	Harbin Institute of Technology, China	Time-domain lanthanide luminescence bioimaging and biosensing	Tuesday 11th, 15:15h
Haichun Liu	KTH Royal Institute of Technology, Sweden	Lanthanide upconversion nanoparticles for infrared photodetection and super-resolution microscopy	Thursday 13th, 10:15h
Allison Dennis	Northeastern University, USA	Engineering Semiconductor Quantum Dots for Biosensing and Imaging Applications	Thursday 13th, 15:15h
Energy session			
Javier Concepción	Brookhaven National Laboratory, USA	Selective and efficient conversion of CO to methanol: Towards cascade strategies for CO ₂ reduction to liquid fuels	Monday 10th, 15:15h
Mohammad Nazzerudin	EPFL, Switzerland	Development of Efficient and Stable Perovskite Solar Cells and Modules	Tuesday 11th, 10:15h
José Ramón Galán-Mascarós	Institute of Chemical Research of Catalonia-ICIQ, Spain	Artificial photosynthesis: state-of-the-art, perspectives and catalysis	Thursday 13th, 10:15h
Fernando Martín	IMDEA - Universidad Autónoma de Madrid, Spain	Real-time imaging and control of electron currents: towards attochemistry	Thursday 13th, 15:15h

INVITED SPEAKERS			
Presenting author	Affiliation	Title	Schedule
<i>Bio session</i>			
Jose M. Rodríguez Ramos	Wootpix Inc., Spain	Quantitative phase imaging using hte WFPI technique with the SEBIQ-phase camera	Monday 10th, pm
Jung-Young Son	Konyang University, Korea	Spectral image for detecting green mold pathogen on lemon	Monday 10th, pm
Tomasz Grzyb	Adam Mickiewicz University, Poland	Upconverting nanoparticles sensitized by Er3+ or Tm3+ ions and their applications	Monday 10th, pm
Claudio Roscini	Catalan Institute of Nanoscience and Nanotechnology, Spain	Wax-based photothermoreponsive switches	Monday 10th, pm
Artur Bednarkiewicz	Institute of Low Temperature and Structure Research, Poland	New concept of subdiffraction imaging and sensing with photon avalanche materials	Tuesday 11th, am
Kohei Soga	Tokyo University of Science, Japan	Polarity Based Nanostructure Design for Near Infrared Luminescence	Tuesday 11th, am
Anna Lukowiak	Institute of Low Temperature and Structure Research, Poland	Luminescent bioactive nanoglasses and composites	Tuesday 11th, pm
Si Wu	University of Science and Technology of China	Red-Light-Responsive Metallopolymers for Biomedical Applications	Tuesday 11th, pm
Fiorenzo Vetrone	Université du Québec, Canada	Rare Earth Doped Nanoparticles: Manipulating their Architecture for Theranostics	Thursday 13th, am
Marta Quintanilla	Universidad Autónoma de Madrid, Spain	Developing Sensors and Actuators for Biological Environments: Luminescence Thermometry and Plasmonic Heating	Thursday 13th, am
Sidney J.L. Ribeiro	São Paulo State University, Brazil	Fluorescent Dyes Based On Pyriliun and Azo-compound Structures: Synthesis, PhotoinducedIsomerization, Solvathocromism and Fluorescent Probes For Selective Microenvironment Systems	Thursday 13th, pm
Antonio Benayas	Universidad Autónoma de Madrid, Spain	Lifetime-thermometry for real time monitoring of liver inflammation: addressing the “tissue-issue” when measuring temperature in vivo	Thursday 13th, pm
Riccardo Marín	Universidad Autónoma de Madrid, Spain	In pursue of a brighter future for silver sulfide nanocrystals in fluorescence imaging and thermal sensing	Thursday 13th, pm

<i>Energy session</i>			
Ilka Kriegel	Italian Institute of Technology, Italy	Hybrid nanoscale materials for light-energy conversion and storage	Monday 10th, pm
Alberto Bollero	IMDEA Nanoscience Madrid, Spain	From the Cosmos to the Nanoscale: Nanostructured Permanent Magnets for a Green Energy Transition	Monday 10th, pm
Kasper Moth-Poulsen	Chalmers University of Technology, Sweden	Solar Thermal Management Materials	Monday 10th, pm
Peter J. Skabara	University of Glasgow, United Kingdom	Novel organic semiconductors as downconverters for photonic applications and low power lighting	Monday 10th, pm
Rui M. Almeida	Universidade de Lisboa, Portugal	Phosphor-Up-converted white LEDs assisted by 1-D photonic crystals	Monday 10th, pm
Inés García-Benito	Universidad Complutense de Madrid, Spain	Searching for renewable energies: the breakthrough of perovskites.	Tuesday 11th, am
Airán Ródenas	Universidad de La Laguna, Spain	Seamless integration of photonics within harsh-environment resistant crystals with 3D laser nanolithography: Towards real-world advanced optical sensors	Tuesday 11th, am
Cecilia Noguez	Universidad Nacional Autónoma de México	Plasmonic response of nanoparticles arrays and its potential applications	Tuesday 11th, am
Stefan Schweizer	South Westphalia University, Germany	Lanthanide-doped Glass Light Guides with Bright Luminance in the Green Spectral Range	Tuesday 11th, am
Ruud E.I. Schropp	University of the Western Cape, South Africa	Freedom of spectrum utilization and customization of color and print in solar cell technology	Tuesday 11th, am
Daniela Fontani	CNR-INO, Italy	Field optimization for bifacial modules	Tuesday 11th, am
Natalie Stingelin	Georgia Institute of Technology, USA	Phase Diagrammes of Complex Materials: From the Katana, Swiss Chocolates to Organic Semiconductors	Tuesday 11th, pm
Adel A. Ismail	Kuwait Institute for Scientific Research, Kuwait	TBC	Tuesday 11th, pm
Tory Welsch	University of Delaware, USA	Colloidal Quantum Dot Heterostructures for Photon Upconversion	Tuesday 11th, pm
Tom Lograsso	Critical Materials Institute, USA	Bioleaching critical minerals from end-of-life feedstocks	Thursday 13th, am
Frances Wall	University of Exeter, United Kingdom	Responsible rare earths: circular economy approaches including life cycle assessment	Thursday 13th, am
Fernando León/ Rubén Ortuño	Banknote Production Control Department of Banco de España (Spain)	Materials for banknotes security	Thursday 13th, am
Emilio Palomares	ICIQ-BIST, Spain	Molecular Solar Cells. From Dyes to Hybrid Semiconductors	Thursday 13th, pm
Dirk Guldi	Friedrich-Alexander-Universität Erlangen-Nürnberg, Germany	Porphyrinoid-Based Charge and Photon Management	Thursday 13th, pm
Emilio Nieto	National Hydrogen Centre – CNH2, Spain	Hydrogen: present and Future	Thursday 13th, pm

CONTRIBUTED "ORAL"

ENERGY AND OTHER APPLICATIONS

Presenting author	Category	Title	Code
Michele Ghini	Senior / Dr.	Static and dynamic control of electronic band profiles via depletion layer engineering in core-shell nanocrystals	1 OE
José G. Sánchez	Senior / Dr.	Effect of Chalcogen Substitution Atom on the Performance Parameters of PM6:Y6-based Ternary Solar Cells	2 OE
Eugenia Martínez-Ferrero	Senior / Dr.	Self-Assembled Molecules as Selective Contacts in CsPbBr ₃ Nanocrystal Light Emitting Diodes	3 OE
Zaida Curbelo	Student	Synthesis of MnAlC / Hydrogel Inks for Fabricating Alternative Permanent Magnets by Bonding and 3D-printing	4 OE
Ester M. Palmero	Senior / Dr.	Understanding the Role of Particle Size in the Development of Flexible Permanent Magnet-Polymer Filaments for Additive Manufacturing	5 OE
Dora A. González	Student	Novel Carbazole-Based Conjugated Molecules as Self-Assembled Hole Transporting Monolayers for Inverted Perovskite Solar Cells	6 OE
Miguel A. Hernández-Rodríguez	Senior / Dr.	Designing all-photonic molecular analogues of electrical components: a molecular filter based on Ln ³⁺	8 OE
Daniel Avram	Senior / Dr.	Upconversion emission properties in transition metal, lanthanide co-doped systems: a spectral selective, time-resolved investigation	9 OE
Albano N. Carneiro Neto	Senior / Dr.	Simulating the emission of co-doped Yb ³⁺ /Er ³⁺ upconverting nanoparticles	10 OE
Sofia Zanella	Student	Upconverting luminescent material as an all-photonic platform for molecular logic: from basic to more complex logic operations	11 OE
Fernando E. Maturi	Student	Understanding the anomalous behavior of liquid water through upconversion nanothermometry	12 OE
Anjana Panangattil Muraleedharan	Student	Spectroelectrochemical investigations for photodoping of colloidal indium oxide nanocrystals	13 OE
Fengchan Zhang	Student	Enhancement of single nanoparticle luminescence and trapping force by surface plasmon polaritons	14 OE
Joaquín Sanchiz	Senior / Dr.	Down-shifting layers for silicon-based PV module applications	15 OE
Wenhui Li	Senior / Dr.	From Polymer Films to Self Assembling Molecular Electrodes for Efficient and Stable Inverted Perovskite Solar Cells	16 OE
Alice Carlotto	Senior / Dr.	Flexible photonic systems: from 1D photonic crystals to active planar waveguides	17 OE
Adilet Zhakeyev	Senior / Dr.	Multi-material and multi-colour 3D printing enabled by upconversion and metallic catalyst	18 OE
Marcin Runowski	Senior / Dr.	New Frontiers for High-sensitivity Luminescence Manometry	19 OE
Przemysław Woźny	Senior / Dr.	Upconversion luminescence of novel FeS ₂ @NaYF ₄ : Yb ³⁺ , Er ³⁺ nanocomposites	19 OE
Andrea Rubino	Senior / Dr.	Hybrid nanosystems for new solar-based technology solutions	20 OE
Carlos Brites	Senior / Dr.	Lanthanide-based logic: a venture for the future of molecular computing	21 OE
Wilfried van Sark	Senior / Dr.	Outdoor performance of nanocrystal luminescent solar concentrators	22 OE
Roberto Campana	Senior / Dr.	CNHZ's recent advances in reversible solid oxide devices using scalable and cost-effective manufacturing processes	23 OE
Michal Žitňan	Senior / Dr.	The study of three types of materials for "green" hydrogen production by water splitting: TiO ₂ , ZnO and CdS.	24 OE
Aswin Asaithambi	Senior / Dr.	Free carrier generation via photo-induced energy transfer in Perovskite-TMDC (0D-2D) Hybrid System	25 OE
Elna Andresen	Senior / Dr.	Upconversion for security tags and future applications	26 OE
Yazhi Liu	Student	Fabrication of Anti-counterfeiting Nanocomposites with Multiple Security Features via Integration of a Photoresponsive Polymer and Upconverting Nanoparticle	27 OE
Christian Würth	Senior / Dr.	Highly doped upconversion nanoparticles with strongly reduced energy losses	28 OE
Bryce S. Richards	Senior / Dr.	Upconversion for photovoltaics: can it ever really work?	29 OE
Damien Hudry	Senior / Dr.	Unprecedented atomic-scale details of the interface in lanthanide-based core@shell nanocrystals: when the interface controls the "device"	30 OE
A. Turshatov	Senior / Dr.	Application of Upconversion and Downshifting Luminescence of Lanthanide-based Phosphors in Plastic Recycling	31 OE
Albenc Nexha	Senior / Dr.	Composites with lanthanide doped fluorescent particles for flying, seed-like soft robots that monitor environmental temperature	32 OE
Erving Ximendes	Senior / Dr.	Machine learning and the improvement of readouts provided by luminescent thermometers	33 OE

CONTRIBUTED "ORAL"

BIO APPLICATIONS

Presenting author	Category	Title	Code
Rodolfo N. Silva	Student	Novel and high-sensitive primary and self-referencing thermometers based on the excitation spectra of lanthanide ions	1 OB
Natalie Fardian-Melamed	Senior/Dr.	Seeing the Force: Single Avalanching Upconverting Nanoparticles as Ultrasensitive Local Force Transducers	2 OB
Natalia Jurga	Student	Luminescence of different up-converting nanoparticles in blood	3 OB
Pablo Camarero	Student	Handling of single multicellular spheroids: a 3D tumor model	4 OB
Lewis E. MacKenzie	Senior/Dr.	Straight-forward synthesis of upconversion nanoparticles for biosensing applications using a polymer-assisted open-air modest-temperature method: control of shape and emission	5 OB
Sergio Antonio Marques de Lima	Senior/Dr.	The influence of experimental parameters on the luminescent properties of red-emitting hybrids for bioimaging	6 OB
Fernando Lahoz	Senior/Dr.	Optical molecular detection through fluorescence quenching	7 OB
Jose J. Velázquez	Senior/Dr.	Effect of Al ₂ O ₃ on the crystallization of NaYF ₄ in oxyfluoride silicate glass-ceramics for optical thermometer	8 OB
Mario Díaz	Senior/Dr.	FLT _X 2: The novel ALL IN ONE Tamoxifen Derivative: Antiestrogen, Fluorescent and Photosensitizer	9 OB
Qiuqiang Zhan	Senior/Dr.	Nonlinear excitation and depletion in upconversion for super-resolution	10 OB
Fernando Aparecido Sigoli	Senior/Dr.	Dual magnetic field and temperature optical probes based on lanthanide-doped NaREF ₄ nanoparticles containing hierarchically structured heterogeneous crystalline phases	11 OB
Pilar Formentín	Senior/Dr.	Polymeric Surfaces based on Template Replica for Cell Culture	12 OB
Patricia Haro-González	Senior/Dr.	Improving stability and thermal sensitivity of an optically trapped upconversion nanoparticle by coating with a thermo-sensitive polymer	13 OB
Elisa Ortiz Rivero	Student	Rare-earth-doped microspinner for non-invasive sensing	14 OB
Fernando Arteaga-Cardona	Student	High quantum yield SWIR emitting heterogeneous core-shell lanthanide-based nanocrystals for biomedical imaging applications	15 OB
Adolfo Speghini	Senior/Dr.	Nanocomposite films of α -synuclein with inorganic nanoparticles	16 OB
Jason Casar	Student	Hybrid polymer-ceramic mechanosensors for near-IR induced, color responsive pressure sensing in vivo	17 OB
Joana Costa Martins	Student	Er ³⁺ -doped nanoparticles as primary thermometers and NIR radiation sensors	18 OB
Parivash Moradifar	Senior/Dr.	Ultrafast decay alkaline-earth rare-earth fluoride nanoparticles for novel X-ray and gamma-ray scintillators	19 OB
Maria Méndez	Senior/Dr.	Synthesis and Characterization of Persistent Blue Light Luminescence Nanoparticles for Photodynamic Therapy (PDT)	20 OB
Emma Martín Rodríguez	Senior/Dr.	Influence of cell incubation parameters on molecular imaging of atherosclerosis with functionalized gold nanoshells	21 OB
Artiom Skripka	Senior/Dr.	Expanding the Library of Photon Avalanching Nanoparticles	22 OB

POSTER CONTRIBUTION

Presenting author	Category	Area	Title	Code
Ivet Maqueira Albo	Student	Energy	Understanding of light-driven chemical reactions using in situ Raman spectroscopy	1 PE
Nastaran Kazemi Tofighi	Student	Energy	Exfoliation and transferring of 2D materials for potential energy conversion and storage applications	2 PE
Nicola Curreli	Dr.	Energy	Depletion Layer Engineering in Core-Shell Metal Oxide Nanocrystals	3 PE
Nicolò Petrini	Student	Energy	Multi-Layer Optical Model for Metal Oxide Nanocrystals	4 PE
Luca Rebecchi	Student	Energy	Solar energy applications for Doped Transparent Metal Oxides	5 PE
Franzette Paz-Buclatin	Student	Energy	Diffraction microlenses inside laser crystals by 3D fs-laser nanolithography	6 PE
Wiebke Alex	Student	Energy	Photoisomerization of Push-pull Functionalized Norbornadiene/Quadracyclane Couples for Solar Energy Storage	7 PE
Peter R. Schol	Student	Energy	Investigation of Rylene-Based Dyes for Application in Dye-Sensitized Solar Cells	8 PE
Alexander Zika	Student	Energy	Photo-Switchable Polymer Nano-Assemblies	9 PE
Marcin Bilewicz	Dr.	Energy	Multilayer PE film with recycled filler	10 PE
Sylwia Ryszczczyńska	Student	Energy	Temperature-dependent up-conversion luminescence in core/shell nanoparticles doped with Ho ³⁺ and Er ³⁺ ions upon 1151 nm excitation	11 PE
Paweł Jarka	Student	Energy	Investigation of the composite structures for organic solar cells (OSCs) based on bulk heterojunction (BHJ)	12 PE
Marta Zaborowska	Student	Energy	Electrospinning and optical characterization of RE-doped ZnO nanofibers	13 PE
Lidiya M. Muhammad	Student	Energy	Anthracene for Molecular Solar Thermal Systems (MOST)	14 PE
Fernando Déniz	Student	Energy	Synthesis and characterization of mixed oxides with rare earth	15 PE
Selene Díaz-González	Student	Energy	Synthesis, structural characterization and optical studies on the perovskite-type mixed oxide SrFe _{1-x} CoxO ₃ (x=0.25, 0.50, 0.75) doped with rare-earth elements.	16 PE
Gabriela Brito-Santos	Student	Energy	Degradation analysis of highly UV-resistant down-shifting layers for applications on photovoltaics devices	17 PE
Weronika Smok	Student	Energy	Hybrid TiO ₂ NPs-SnO ₂ NWs photoanode for developing the performance of DSSC	18 PE
Tomasz Tański	Dr.	Energy	Zirconia nanofibers – from synthesis to optical properties characterization	19 PE
Miguel Medina-Alayón	Student	Energy	Shifting NIR photons into UV-VIS radiation with rare-earth doped materials for photocatalytic pollutant degradation and water-splitting	20 PE
Sheila Torres-García	Student	Energy	Anti-counterfeiting using colour tuneable upconversion photonic materials for codification of luminescent patterns	21 PE
Kyohei Okubo	Dr.	Bio	Near infrared hyperspectral imaging for biomedical applications including lipid visualization in liver and submucosal tumor detection	1 PB
Leyre Aldaz-Caballero	Student	Bio	CuInS ₂ quantum dots as pressure nanosensors	2 PB
Ely Bravo	Student	Bio	Tracking the development of cholestasis rat model with autofluorescence and emitting Ag ₂ S NPs	3 PB
Chiara Cressoni	Student	Bio	From Thermometry to Bioimaging: Lanthanide Activated Nanoparticles as Multifunctional Tools for Biomedical Applications	4 PB
Patryk Falat	Student	Bio	Lanthanide-doped core-shell nanostructures with enhanced VIS-to-UVC upconverted emission for biomedical applications	5 PB
Evelina Voronovic	Student	Bio	Every particle with a crown: protein corona guided accumulation of upconverting nanoparticles in cancer cells	6 PB
Adrian Drozdowski	Student	Bio	NIR to UV up-converting nanoparticles for PDT applications	7 PB
Santi Gené-Marimon	Dr.	Bio	Dispersion of Persistent Luminescent Particles using Different Strategies to Enhance their Antimicrobial Properties	8 PB
Liyan Ming	Student	Bio	Infrared emitting nanoparticles for thermal control in the brain	9 PB
Luis Felipe Morales-Curiel	Student	Bio	Volumetric bioluminescence imaging of cellular dynamics with deep learning based light-field reconstruction	10 PB

POSTER CONTRIBUTION (SHIFT - DBL- DOING BIOLOGY WITH LIGHT)

Presenting author	Category	Area	Title	Code
Anna Ekner-Grzyb	Dr.	DBL	Wheat seedlings' bioimaging and dependence of phytotoxicity on size and functionalization of upconverting NaYF ₄ :Yb,Er@NaYF ₄ nanoparticles	P-DBL 1
David Bartolomé-Martín	Dr.	DBL	Development and optimization of calcium fluorescent sensors based on BK ion channels	P-DBL 2

SHIFT - DBL- DOING BIOLOGY WITH LIGHT (Satellite meeting)

KEYNOTE		Title	
Justin Taraska		Imaging the nanoscale structure of the cell with correlative super resolution light and electron microscopy	Tuesday, 11th, am
Elizabeth M. C. Hillman		TBC	Tuesday, 11th, pm
Valentina Emiliani		Holographic manipulation of neuronal circuits	Thursday, 13th, am
Thomas Blanpied		TBC	Thursday, 13th, pm
INVITED		Title	
<i>Presenting author</i>			
Margarida Barroso		Morphology, topology and function of endosome-mitochondria Interactions in breast cancer cells	Tuesday, 11th, am
Melike Lakadamyali		Super-resolution imaging of cellular processes	Tuesday, 11th, am
Baron Chanda		Role of membrane environment on binding allostery in pacemaker ion channels at single molecule resolution	Tuesday, 11th, am
Sandrine Leveque-Fort		Engineering fluorescence emission for enhanced super-resolution microscopy	Tuesday, 11th, pm
Ricardo Henriques		Super-Resolution and Machine-Learning enabled Live-Cell Biolmaging	Thursday, 13th, am
Stephan Pless		TBC	Thursday, 13th, am
Bradley Baker		TBC	Thursday, 13th, am
Luke Lavis		Designing Brighter Dyes for Advanced Fluorescence Microscopy	Thursday, 13th, am
Barbara Di Ventura		TBC	Thursday, 13th, pm
Benjamin Judkewitz		TBC	Thursday, 13th, pm
CONTRIBUTED "ORAL"			
<i>Presenting author</i>	<i>Category</i>	<i>Title</i>	<i>Code</i>
Carlos Renero-Lecuna	Senior/Dr.	Fluorescent Nd3+-based nanoparticles for NIR nanothermometry	DBL-O1
Niccolò Caselli	Senior/Dr.	Holographic optical tweezers for dynamic control of erythrocyte flickering	DBL-O2
Michael Krieg	Senior/Dr.	Neural engineering with photons as neurotransmitters	DBL-O3
Dirk H. Ortgies	Senior/Dr.	Autofluorescence-free in vivo imaging in the time domain: Tailoring nanoparticles towards their application as contrast agents in the infrared	DBL-O4
Sabrina Mischke	Student	Seeing AMPA receptor complexes in a new light	DBL-O5
Zoe Gidden	Student	Seeing inside the cell using LIVE-PAINT: A new way to image proteins in live cells using super-resolution microscopy	DBL-O6